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GALIULLIN, Z.T.; CHERNIKIN, V.I.

Hydraulic calculation for asbestos-cement gas pipelines. Izv. vys. ucheb. zav.; neft' i gaz 4 no.11:65-70 '61. (MIRA 17:2)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M. Gubkina.

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BELOUSOV, V.D.; GALIULLIN, Z.T.; CHERNIKIN, V.I.

Optimum parameters of multiple-thread gas pipelines. Gaz.prom. 6 no.3:34-37 '61. (MIRA 14:3)
(Gas, Natural—Pipelines)

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TSIMBLER, Yu.A.; CHERNIKIN, V.I.

Evaporation losses of petroleum products during drainage of underground tanks. Neft. khoz. 39 no.3:60-63 Mr '61. (MIRA 16:7)

(Tanks)

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KARIMOV, Z.F.; CHERNIKIN, V.I.

Using separators in batching. Neft. khoz. 39 no.4:56-60 Ap '61. (MIRA 14:6)
(Petroleum--Transportation)
(Separators (Machines))

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BLEYKHER, E.M.; CHERNIKIN, V.I.

Regulating the operation of a pipeline during the shutdown of intermediate centrifugal stations. Neft. khoz. 39 no.11:56-60 N '61. (MIRA 14:12)

(Petroleum--Pipelines)

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ASATURYAN, A.Sh.; GALIULLIN, Z.T.; CHERNIKIN, V.I.

Nonsteady flow of dropping liquid in cylindrical pipes.
Izv.vys.ucheb.zav.; neft' i gaz 5 no.2:87-93 '62. (MIRA 15:7)

1. Zaporozhskiy mashinostroitel'nyy institut i Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M. Gubkina.
(Pipelines—Hydrodynamics)

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KARIMOV, Z.F.; CHERNIKIN, V.I.

Consecutive piping using spacers for petroleum and petroleum products having shear stress. Izv.vys.ucheb.zav.; neft' i gaz 5 no.8:91-94 '62. (MIRA 17:3)

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BOBROVSKIY, S.A.; CHERNIKIN, V.I.

Temperature conditions in gas pipelines. Izv. vys. ucheb. zav.; neft' i gaz 5 no.10:89-94 '62. (MIRA 17:8)

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KARIMOV, Z.F.; CHERNIKIN, V.I.

Using dividers in consecutive pipelining of bright petroleum products. Neft. khoz. 40 no.12:59-63 D '62. (MIRA 16:7)

(Petroleum pipelines)

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CHERNIKIN, V.I.; SHCHERBAKOV, S.G.

Remote determination of locations of accidents in petroleum products pipelines in mountainous regions. Transp. i khran. nefti pt c no.2:6-7 '63. (MIRA 17:10)

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ACCESSION NR: AR4034737

S/0124/64/000/003/B110/B110

SOURCE: Ref. zh. Mekhan. Abs. 3B677

AUTHOR: Abuzova, F. F.; Chernikin, V. I.

TITLE: Losses from evaporation from underground reservoirs with a cross-section constant in height

CITED SOURCE: Tr. N.-i. in-t po transp. i khraneniyu nefti i nefteproduktov, vy*p. 2, 1963, 162-185

TOPIC TAGS: hydromechanics, diffusion, gas storage, petroleum storage, Stefanovskiy flow, atmospheric storage tank

TRANSLATION: The influence of Stefanovskiy flow on the distribution of concentration of vapors of a product in the gas space of an underground atmospheric reservoir is given. A comparison of the results obtained with experiments shows that errors connected with omission of Stefanovskiy flow can amount to 100%. The curves of determining the concentrations without counting Stefanovskiy flow give a lowered concentration at any point of the gas space. Curves including calculations of Stefanovskiy flow coincide satisfactorily with experimental data.

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TONKOSHKUROV, B.A.; CHERNIKIN, V.I.; SVIRIDOV, V.P.

Design of heat exchangers for viscous petroleum products. Transp. i khran.nefti no.6:18-23 '63. (MIRA 17:3)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu nefti i nefteproduktov i Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina.

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SHCHERBAKOV, S.G.; CHERNIKIN, V.I.

Investigations of petroleum-products temperature fields in vertical cylindrical containers. Transp. i khran. nefti no.9:27-34 '63. (MIRA 17:1)

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YASIN, E. M.; CHERNIKIN, V. I.

Calculating cylindrical tanks for stability.
Transp i khran nefti no. 11:14-17 '63. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu nefti i nefteproduktov i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I. M. Gubkina.

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CHERNIKIN, V.I.; NEMUDROV, A.G.; BLEYKHER, E.M.; SHCHERBAKOV, S.G.

Graphoanalytical calculation for the regulation of the centrifugal pumping stations of petroleum product main pipelines. Trudy MINKHiGP no.45:112-133 '63. (MIRA 16:7)

(Petroleum products—Transportations)
(Petroleum pipelines)

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KARIMOV, Z.F.; CHERNIKIN, V.I.

Technology of a successive transfer of petroleum products in the same pipeline. Trudy MINKHiGP no.45:149-154 '63. (MIRA 16:7)

(Petroleum products—Transportations)
(Petroleum pipelines)

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ABEDL' GANI, A.Sh.; CHERNIKIN, V.I.

Increasing the capacity of pipelines for transporting non-Newtonian petroleums. Izv. vys. ucheb. zav.; neft' i gaz 6 no.2:75-80 '63. (MIRA 16:5)

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(Petroleum--Pipelines)

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BOBROVSKIY, S.A.; CHERNIKIN, V.I.

Using consecutive changes in steady states for solving problems of unstable flow in gas pipelines. Izv. vys. ucheb. zav.; neft' i gaz 6 no.2:87-91 '63. (MIRA 16:5)

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(Gas, Natural--Pipelines)

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BELOUSOV, V.D.; GALIULLIN, Z.T.; CHERNIKIN, V.I.

Optimum parameters of gas mains. Trudy MINKHiGP no.45:3-11 '63. (MIRA 16:7)
(Gas pipes)

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GRACHEV, V.V.; GALIULLIN, Z.T.; CHERNIKIN, V.I.

Operation of gas mains without compressors. Trudy MINKHiGP no.45:12-18 '63. (MIRA 16:7)

(Gas pipes)

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GALIULLIN, Z.T.; CHERNIKIN, V.I.

Most advantageous diameter for loopings and insertion pieces on main pipelines. Trudy MINKHiGP no.45:34-39 '63. (MIRA 16:7)

(Petroleum pipelines)

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NEMUDROV, A.G.; BELOUSOV, V.D.; CHERNIKIN, V.I.

Regulating the operation of gas mains with gas engine compressor stations. Trudy MINKHiGP no.45:139-148 '63.
(MIRA 16:7)

(Gas pipes) (Compressors)

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GALIULLIN, Zagid Talipovich; CHERNIKIN, Vadim Ivanovich; NOVIKOVA, M.M., ved. red.

[New methods for designing oil and gas pipelines] Novye metody proektirovaniia gazonefteprovodov. Moskva, Nedra, 1964. 130 p. (MIRA 18:3)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

ASATURYAN, A.Sh.; CHERNIKIN, V.I. (Zaporozhye)

"The movement of immiscible liquids of different viscosity in cylindrical pipes"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

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ABUZOVA, F.F.; CHERNIKIN, V.I.

Calculating losses from evaporation from underground tanks operating under pressure. Trudy NIITransneft' no.3:3-17 '64. (MIRA 18:2)

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VAYNER, M.I., TSIMBLER, Yu.A.; CHERNIKIN, V.I.; Prinimali uchastiye: MAKOVSKIY, V.A., student-diplomnik; ZAKHAROV, G.I., student-diplomnik; MINSKER, I.D.; OTROSHCHENKO, G.P.

Experimental investigation of the evaporation of gasoline from a deepened reinforced concrete tank. Transp. i khran.nefti i nefteprod. no. 3:23-28 '64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov, Spetsial'noye konstruktorskoye byuro "Transneft'avtomatika" i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina. 2. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina (for Makovskiy, Zakharov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov (for Minsker, Otroshchenko).

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DONETS, K.G.; CHERNYKIN, V.I.

Development of steam hollows in consecutive pumping. Transp. i khran. nefti i nefteprod. no.5:3-9 '64. (MIRA 17:8)

1. L'vovskiy politekhnicheskiy institut i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina.

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STRYUK, I.S.; CHERNIKIN, V.I.

Investigating the heat and hydraulic regimes of heat-insulated pipelines. Transp. i khran. nefti i nefteprod. no.7:3-6 '64. (MIRA 17:8)

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BLEYKHER, E.M.; POL'SKIY, S.M.; CHERNIKIN, V.I.

Determining the optimal number of pouring devices in distribution tank farms. Transp. i khran. nefti i nefteprod. no.7:10-13 '64. (MIRA 17:8)

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ABUZOVA, F.F.; CHERNIKIN, V. I.

Distribution of concentrations in pumping a product from a deep reservoir. Transp. i khran. nefti i nefteprod. no.7:13-16 '64.
(MIRA 17:8)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu nefti i nefteproduktov i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.

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ANDREYEVA, E.M.; CHERNIKIN, V.I.

Heat inteference of underground reservoirs deep in the ground. Transp. i khran. nefti i nefteprod. no.8:21-23 '64. (MIRA 17:9)

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KASPEROVICH, V.K.; CHERNIKIN, V.I.

Experimental investigation of the removal of water from petroleum products pipelines. Transp. i khran. nefti i nefteprod. no.12:6-9 '64. (MIRA 18:2)

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DONETS, K.G.; CHERNIKIN, V.I.

Flow discontinuity in the consecutive pumping of various petroleums or petroleum products along one pipeline. Neft. khoz. 42 no. 5: 60-65 My '64. (MIRA 17:5)

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KORNILOV, G.G.; CHERNIKIN, V.I.

Hydraulic calculation of pipeline for gas-liquid mixtures. Neft. khoz. 42 no.8:51-55 Ag '64. (MIRA 17:9)

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TOROCHKOV, I.M.; CHERNIKIN, V.I.; KELLER, A.A.; MATSKIN, L.A.

Transportation and storage of petroleum and petroleum products.
Neft. khoz. 42 no.9/10:24-30 S-O '64. (MIRA 17:12)

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KASPEROVICH, V.K.; CHERNIKIN, V.I.

Experimental investigations of the removal of air from petroleum products pipelines. Transp. i khran. nefti i nefteprod. no.1:7-10 '65. (MIRA 18:4)

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YASIN, E.M.; RASHCHEPKIN, K.Ye.; CHERNIKIN, V.I.

Durability of bends in underground pipelines. Transp. i khran. nefti i nefteprod. no.6:3-6 '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy institut po transportu i Khraneniyu nefti i nefteproduktov i Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.

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KAZUBOV, A.I.; SHCHERBAKOV, S.G.; CHERNIKIN, V.I.

Pipeline transportation of viscoplastic high-pour petroleums requiring heating. Transp. i khran. nefti i nefteprod. no.7:3-7 '65. (MIRA 18:9)

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YASIN, E.M.; RASHCHEPKIN, K.Ye.; CHERNIKIN, V.I.

Stability of pipeline bends laid in fills. Transp. i khran. nefti i nefteprod. no.7:7-11 '65. (MIRA 18:9)

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KAZUBOV, A.I.; SHCHERBAKOV, S.G.; CHERNIKIN, V.I.

Increasing the capacity of pipelines transporting Mangyshlak high-paraffin petroleums. Transp. i khran. nefti i nefteprod. no.8:3-5 '65. (MIRA 18:9)

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ANDREYEVA, E.M.; CHERNIKIN, V.I.

Heat interference of underground tanks deep in the ground. Izv. vys. ucheb. zav.; neft' i gaz 8 no.2:89-92 '65.

(MIRA 18:3)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika I.M. Gubkina.

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ANDREYEVA, E.M.; CHERNIKIN, V.I.

Heat interference in a network of underground reservoirs. Izv. vys. ucheb. zav.; neft' i gaz 8 no.3:85-89 '65.
(MIRA 18:5)

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ASATURYAN, A.Sh.; GERASIMOV, Yu.A.; CHERNIKIN, V.I.

Efficient hydraulic transport of viscous and highly-viscous petroleums. Izv. vys. ucheb. zav.; neft' i gaz 8 no.4:83-87 '65. (MIRA 18:5)

1. Zaporozhskiy mashinostroitel'nyy institut im. V.Ya.Chubarya i Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im.akad. I.M.Gubkina.

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MUSAYEV, R.M.; CHERNIKIN, V.I.

Formation of hydrates in liquefied hydrocarbon gases. Gaz.prom. 10 no.5:36-40 '65. (MIRA 18:6)

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DONETS, K.G.; CHERNIKIN, V.I.

Disruptions in liquefied gas flow in pipelines. Gaz. prom. 10 no.6:41-44 '65. (MIRA 18:6)

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YASIN, E.M.; RASHCHEPKIN, K.Ye.; CHERNIKIN, V.I.

Resistance of underground pipelines under temperature influences. Stroi. truboprov. 10 no.9:7-11 S '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu nefti i nefteproduktov, Ufa (for Yasin, Rashchepkin). 2. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina (for Chernikin).

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STRYUK, I.S.; CHERNIKIN, V.I.

Optimal temperature of the heating of viscous liquids when pumping through pipelines. Neft. khoz. 43 no.3:70-73 Mr '65. (MIRA 18:6)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKIN, Ye.M.

Cobra in western Turkmenia. Priroda 51 [i.e. 52] no.5:115-116 '63. (MIRA 16:6)

1. Severo-Kavkazskoye otdeleniye nauchno-issledovatel'skogo instituta zhivotnogo syr'ya in pushniny, Krasnodar.
(Turkmenistan—Snakes)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKIN, Ye.M.

Wintering of the snipe Capella solitaria Hodgs. in Kamchatka.
Ornitologiia no.6:483 '63. (MIRA 17:6)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNICHN, Ye.M.

Biology of Kamchatkan sea eagle (Haliaeetus pelagicus Pall.). (MIRA 18:10)
Ornitologiia no.7:272-275 '65.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5"

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ЧЕРНИКИНА Л.А.

ANIKANOVA, K.F.; BETTS, G.E.; ZHAKOVA, V.G.; KOMSKAYA, N.F.; KARMIN, B.K.; PRISS, L.S.; REZNIKOVSKIY, M.M.; CHERNIKINA, L.A.; SHTEYN, Ye.B.

Structural and characteristic similarity of Soviet SKU polyusoprene rubber and natural rubber. Kauch.i rez.no.1:4-14 Ja '57. (MLRA 10:2)
(Rubber--Synthetic)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

Br. Abs.

CHERNIKINA, N.I.

XVI-1, Chem. Eng.; Plant; Machinery

Colorimetric method of controlling successive pumpings [of petroleums]. N. I. Chernikina (*Neft. Khoz.*, 1948, No. 7, 53—54; *J. Inst. Petrol.*, 1950, 36, 378A).—Successive pumpings of light-coloured petroleum products of similar *d* can be controlled by adding dye to the front portion of the transfer and checking the transition point colorimetrically. By use of photoelectric equipment, the routing of different products can be made automatic the optical *d* of material passing through the line is compared with a colour standard. R. H. CLARKE.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

IVANOV, S.Z.; SAPRONOV, A.R.; CHERNIKINA, V.G.

Improving the method for determining the chromaticity of sugar products. Sakh. prom. 37 no.10:5-11 O '63. (MIRA 16:12)

1. Voronezhskiy tekhnologicheskiy institut.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKHOV, Yu.A.; LUK'YANOV, V.F.; KOZLOVA, A.B.

Analytical chemistry of thorium. Report No.2: Chelatometric determination of thorium in monazite concentrates following its separation on the KU-2 cation exchanger. Zhur.anal.khim. 15 no.4:452-454 Jl-Ag '60. (MIRA 13:9)
(Thorium--Analysis)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKOV, Aleksey Alekseyevich, kand.tekhn.nauk, dotsent

Construction of equivalent networks for circuits with periodically varying parameters. Izv. vys. ucheb. zav.; elektromekh. 6 no.3: 341-349 '63. (MIRA 16:5)

1. Kuybyshevskiy industrial'nyy institut.
(Equivalent circuits) (Electric networks)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKOV, A.A., kand.tekhn.nauk, dotsent

Effective equivalent circuits of zero-sequence with coupling transformers for overhead close-running power transmission lines. Izv. vys. ucheb. zav.; energ. 6 no.12:14-19 D '63. (MIRA 17:1)

1. Kuybyshevskiy politekhnicheskiy institut imeni V.V.Kuybysheva. Predstavlena kafedroy elektricheskikh setey i sistem.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKOV, A. A.

Dissertation: "An Investigation of the Process of Dielectric Strength Restoration in a Gap Between the Contacts of an Air Circuit Breaker." Cand Tech Sci, Moscow Power Engineering Inst, Moscow, 1953. (Referativnyy Zhurnal--Fizika--Moscow, Apr 54)

SO: SUM 243, 19 Oct 1954

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKOV, A.A.

Three years experience with student work teams. Politekh. obuch. no.7:23-30 Jl '58. (MIRA 11:8)

1. Zaveduyushchiy Stavropol'skim krayevym otdelom narodnogo obrazovaniya.
(Field work (Educational method)) (Education, Cooperative)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

CHERNIKOV, Anton Antonovich; MANEVSKIY, A.D., red. izd-va; NAZAROVA, A.S., tekhn. red.

[Student brigades on collective and state farms of Stavropol Territory] Uchenicheskie brigady v kolkhozakh i sovkhozakh Stavropol'ia. Moskva, Izd-vo "Znanie," 1961. 45 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.11, Pedagogika, no.15) (MIRA 14:10)

1. Chlen kollegii Ministerstva prosveshcheniya RSFSR (for Chernikov). (Stavropol Territory—Education, Cooperative) (Stavropol Territory—Agriculture)

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CHERNIKOV, A.A.

PHASE I BOOK EXPLOITATION 982

Voprosy geologii urana (Problems in the Geology of Uranium) 159 p. (Series: Atomnaya energiya. Prilozheniye, 1957, no. 6) 7,000 copies printed.

Resp. Ed.: Konstantinov, M.M.; Tech. Ed.: Usachev, G.L.

PURPOSE: This book is of interest to uranium exploration specialists and geologists studying associated minerals.

COVERAGE: The present collection of 12 articles by different authors discusses the genesis of uranium deposits, uranium mineralogy, and methods of research and analysis used in evaluating ores. Several new minerals are described and a review of aerogeophysical exploitation in the United States, Canada and Australia is given. The articles are accompanied by diagrams, tables, photographs, and bibliographic references.

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CHERNIKOV, A.A.

AUTHOR CHERNIKOV, A.A., KRUTETSKAYA, O.V., ORGANOVA, N.I. 89-8-8/26

TITLE Sodium Autenite.
(Natroautenit)-Russian)

PERIODICAL Atomnaya Energiya, 1957, Vol 3, Nr 8, pp 135 - 140 (U.S.S.R.)

ABSTRACT In 1953 a new mineral was found in a Russian mountain massif- a hydrous sodium -uranium phosphate. The mineral belongs to the group of uranium micas, and is closely related to autonite with respect to its properties. The following experimental data concerning the new mineral are available:

a) Chemical composition:

UO_3	61,9 ÷ 62,53%	Co_2	0,24 %
P_2O_5	15,56 ÷14,69%	MgO	0,43 %
Na_2O	5,62 ÷ 6,88%	Al_2O_3	0,32 %
CaO	1,2 ÷ 0,14%	Fe_2O_3	0,97 %
SiO_2	1,6	H_2O	13,07 ÷ 14,84 %

b) Stoichiometric formula: $Na_2(UO_2)_2(PO_4)_28H_2O$

c) Specific weight: 3,584 g/cm^3

d) Crystal lattice spacing: a = 6,97 Å
c = 8,69 Å c/a = 1,245

(3 tables, 2 illustrations and 6 Slavic references).

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Sodium Autenite. 89-8-8/26

ASSOCIATION Not Given.
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CHERNIKOV, A.A.; POKROVSKAYA, T.L.; NESTEROVA, Yu.S.; ORGANOVA, N.I.

Wulfenite containing uranium. Zap.Vses.min.ob-va 89 no.2: 180-186 '60. (MIRA 13:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Wulfenite) (Uranium)

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CHERNIKOV, A.A.

Supergene zoning in sulfide-uranium deposits and the cause of their origin. Trudy IGEM no.70:162-181 '62. (MIRA 15:9)
(Uranium ores) (Sulfides)

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CHERNIKOV, A A

L 50199-65 EPA(s)-2 /EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c) Pu-4
IJP(c) WVH/ES/JD/WW/JG

AM5014982 BOOK EXPLOITATION UR/553.061:546.79

Batulin, S. G.; Golovin, YE. A.; Zelenova, O. I.; Kashirtseva, M. F.; Komarova, G. V.; Kondrat'yeva, I. A.; Lisitsin, A. K.; Perel'man, A. I.; Sindel'nikova, V. D.; Chernikov, A. A.; Shmariovich, YE. M.

Exogenous epigenetic deposits of uranium; formation conditions (Ekzogennyye epigeneticheskiye mestorozhdeniya urana; usloviya obrazovaniya). Moscow, Atomizdat, 1965. 321 p. illus., biblio. Errata slip inserted. 1100 copies printed.

TOPIC TAGS: deposit formation, epigenetic theory, exodiagenetic deposit, surface uranium accumulation, uranium bituminous deposit, uranium deposit, uranium, nuclear fuel.

PURPOSE AND COVERAGE: This book is intended for readers specializing in the geology of ore deposits, in particular for those concerned with atomic raw materials, and also for students of higher-education institutions. In the book, for the first time in Soviet and foreign literatures, the epigenetic theory of uranium-deposit formation is expounded. Many Soviet and foreign source materials

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have been used in this book, and some of the investigations carried out by the present authors are published in this book for the first time. Several names of Soviet scientists working in this field are mentioned. V. A. Uspenskiy collaborated on Ch. X, and M. A. Viselkina on Ch. III. The authors thank A. A. Saukov, deceased, Corresponding Member Academy of Sciences USSR, and F. I. Vol'fson, D. G. Sapozhnikov, V. I. Gerasimovskiy, M. F. Stralkin, G. S. Gritsayenko, and I. P. Kushnarev, Doctors of Geologico-Mineralogic Sciences; V. I. Danchev, Candidate of Geologico-Mineralogic Sciences, and N. A. Volokovykh. There are about 12 pages of references of which about 3/4 are Soviet.

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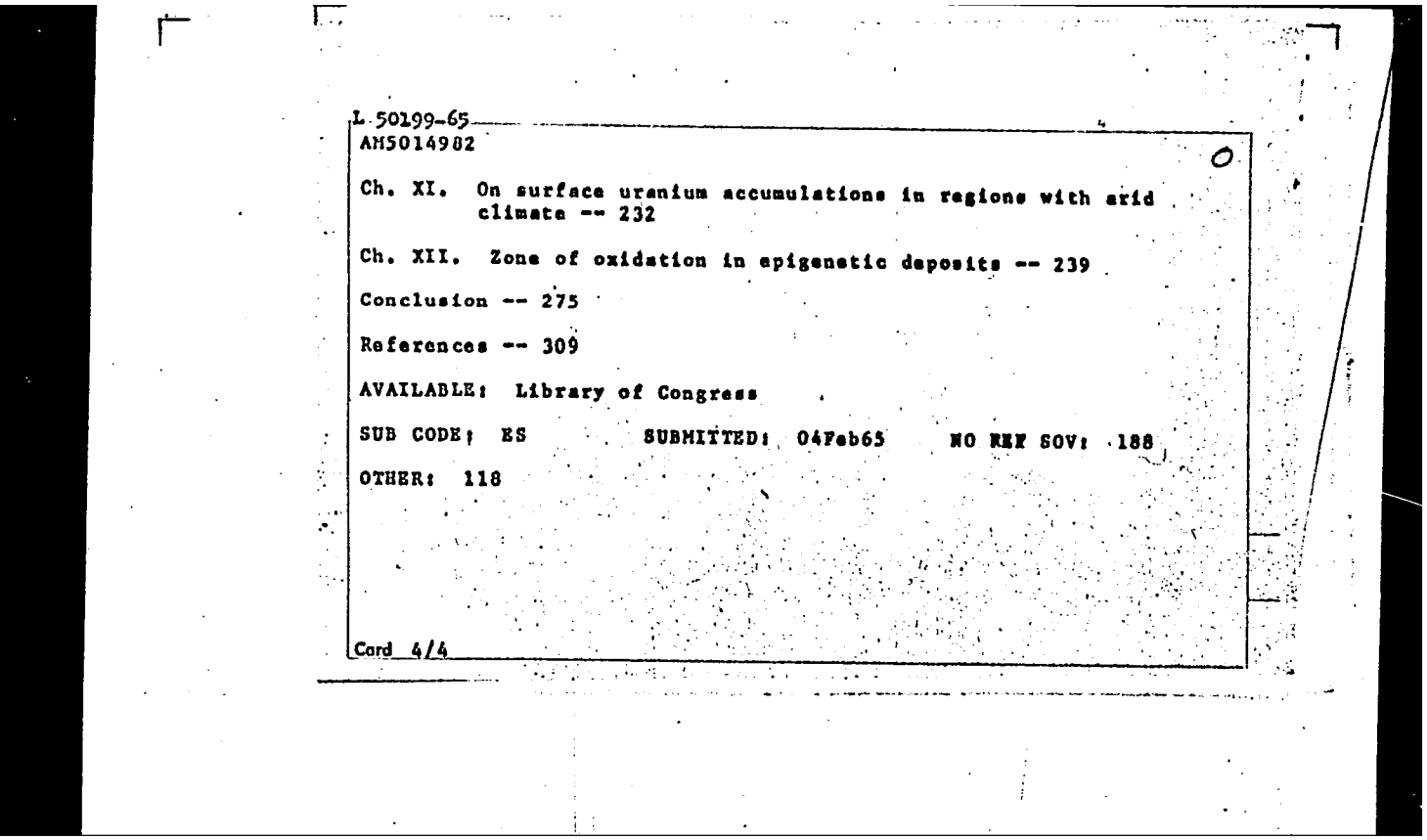

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BATULIN, S.G.; GOLOVIN, Ye.A.; ZELENOVA, O.I.; KASHIRTSEVA, M.F.; KOMAROVA, G.V.; KONDRAT'YEVA, I.A.; LISITSIN, A.K.; PEREL'MAN, A.I., doktor geol.-miner. nauk; SIDEL'NIKOVA, V.D.; CHERNIKOV, A.A.; SHMARIOVICH, Ye.M.; MURADOVA, A.A., red.

[Exogenetic epigene uranium deposits; conditions governing their formation] Ekzogennye epigeneticheskie mestorozhdeniia urana; usloviia obrazovaniia. [By] S.G.Batulin i dr. Moskva, Atomizdat, 1965. 323 p. (MIRA 18:5)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

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E032/E314

3,5800

AUTHORS: Borovikov, A.M., Kostarev, V.V., Mazin, I.P. and Chernikov, A.A.

TITLE: Relation between the magnitude of the radar signal reflected from a cloud and the cloud parameters

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy. no. 36. Moscow, 1961. Voprosy fiziki radiolokatsii oblakov, 14 - 30

TEXT: Atlas (Journ. of Met. v.11, no.4, 1954) and Donaldson (Journ. of Met., v.12, no. 3, 1955) have discussed the possibility of the measurement of the liquid-water content of clouds by radar methods and have concluded that this was possible. In view of the considerable scientific and practical importance of the problem, the authors undertook a theoretical and experimental study of this subject and the results are now reported. Theoretical analysis showed that the strength of the reflected radar signal provided information about the quantity

$$Z = \int_0^\infty n(r)\, r^6\, dr \qquad (4) .$$

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Relation between ....

Since the liquid-water content is given by

$$w = \frac{4}{3} \pi \int_0^\infty n(r)\, r^3\, dr \qquad (5),$$

it follows that the relation between Z and w depends on the form of the particle-size distribution. Detailed examination of known drop-size distributions shows that w can be determined provided there are not too many large particles. The experimental part was carried out from the aerological radar station developed and built at TsAO and operating at $\lambda = 3.2$ cm. The aim was to obtain radar data which could be compared directly with aeroplane observations. A description of the apparatus is said to be available elsewhere [Abstracter's note: reference not given]. A detailed numerical table is reproduced showing a comparison between radar observations and observations carried out from an aeroplane with the aid of the drop-size meter developed by Nevzorov at TsAO (c.f.* pp. 3-13 of this issue). General conclusions: strong signals ($Z > 10^{-15}$ cm^3) are due to large particles

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so that practically all the characteristics obtained with the radar equipment refer only to the large-particle "cloud". Since the presence of even a small number of such particles in clouds has an appreciable effect on the reflected signal, and since the strength of the signal is very sensitive to the size spectrum, it is considered that the relation between Z and w cannot, in practice, be separated from the general background due to other factors, i.e. w cannot be determined from Z alone. Thus, the "optimistic conclusions" of Atlas and Donaldson are considered unfounded. It is noted, however, that this does not mean that radar methods cannot be used in cloud studies. On the contrary, because the radar signal provides information about the presence and behaviour of large particles in clouds, this opens up new possibilities in the experimental study of clouds and precipitation.
There are 2 figures and 4 tables.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

AUTHORS: Gorelik, A. G., Kostarev, V. V., Chernikov, A. A. 5o-58-5-2/2o

TITLE: Radar Measurement of Turbulence in Clouds (Radiolokatsionnoye izmereniye turbulentnykh dvizheniy v oblakakh)

PERIODICAL: Meteorologiya i Gidrologiya, 1958, Nr 5, pp 12-19 (USSR)

ABSTRACT: In recent years the possibility of a further perfection of the method and an extension of program of the meteorological observations by means of these methods of operation already introduced arose. This development is possible in 3 directions complementing each other:
1) Modernization of the usual apparatus according to the objects and the requirements of the meteorologists.
2) Elaboration of a special aerological apparatus.
3) Determination of data on reflection-sources of signals of a meteorological origin. The above-mentioned methods in a certain sense are inertia-like. The increase in this property can considerably increase the domain of employment of these methods in aerology. At the same time it is beyond that the inertia-less method, i. e., the observations of every impulse separately, can give valuable

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additional information on the physical properties of meteorological phenomena. Observations according to the last method are described. The measurement mentioned in the title is explained by figure 1. At the output of the receiver a sequence of impulses of the radio-echo (Figure 1 v) forms. For the determination of the connections between the fluctuation amplitudes of the sequence of reflected signals and the mean square velocity of the chaotic motions of dispersing particles the authors employ a theory which was worked out during the investigation of the statistical nature of the ionosphere (References 1,2). A measuring method of the velocity of the radio signal expressed in formulae (1) - (15) is considered inconvenient by the authors. The estimation of the velocity with regard to orientation is expressed by the formula:

$$v_s = \frac{n\lambda}{2\Delta T} \quad (17)$$

The counting of the distinctly marked maxima during the time of observation and the multiplication with a con-

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stant coefficient $\frac{\lambda}{2\Delta T}$ is sufficient. A block scheme of the measuring device is shown by figure 2. Figure 3 gives recordings of the pulse-sequence. The pulses followed each other at 1/1500 seconds distance. The demands made on the apparatus mainly require that the frequency of the magnetron during the observation may change by a amount which is much smaller than $\frac{1}{0}$, that means:

$\Delta f \ll \frac{1}{\tau}$. By the investigation of the fluctuation of the signal which is reflected by 2 weakly fluctuating local objects the frequency drop can be estimated. By the above-mentioned method the chaotic motions of the diffusers in different types of clouds and precipitation were investigated in summer and fall 1957. The distribution of the amplitudes of the received signal well agrees with the theoretical data. The not yet numerous results obtained from the work permit some conclusions on the amount

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of chaotic agitations in the clouds. The values of v_o for a vertical column of 150 m brought to an average, lie between 0,1 and 2,0 seconds. The highest values were obtained for thunder-clouds, the lowest ones for the stratus clouds. The method proved to be usable for this purpose.
There are 4 figures and 2 references, 2 of which are Soviet.

1. Clouds--Turbulence 2. Turbulence--Measurement
3. Radar--Performance 4. Meteorology

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D/124/62/000/004/023/030
D251/D301

3,5000

AUTHORS: Gorelik, A. G. and Chernikov, A. A.

TITLE: The study of turbulence in clouds by a radar method

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1962, 122, abstract 4B739 (Tr. Tsentr. aerol. observ., 1959, no.31, 53-63)

TEXT: A report is made on a new method of detecting the chaotic displacements of cloud particles carried by the turbulent motions of the air within the cloud. The method is based on observation of the dispersion of the cloud particles (droplets of water and ice-crystals) by electromagnetic waves aimed at various parts of the cloud with the aid of an ordinary radar apparatus, of 3 cm range. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

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E032/E435

6.4770

AUTHOR: Chernikov, A.A.

TITLE: On the effect of fluctuations in echo signals from clouds on the operation of a store

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy. no.36. Moscow, 1961. Voprosy fiziki radiolokatsii oblakov, 118-125

TEXT: In order to extend the range of applications of an aerological radar apparatus in cloud observations, a storage circuit was incorporated in the receiving part of the equipment. This ensured that weak echoes would be detected and their intensity measured. The method requires a knowledge of both the amplitude characteristics of the store and of the dependence of the "efficiency" (i.e. the improvement in the signal to noise ratio) on the width of the fluctuation spectrum of the radio echoes. A statistical analysis is now given of the amplitude characteristics of a store of this type for a constant and a fluctuating signal. Analytical expressions are derived for the amplitude at the output of the integrator as a function of the signal-to-noise power level ratio. Comparison with experimental

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On the effect of fluctuations ...

data showed that the theoretical expressions are in good agreement with experimental data. The "efficiency" is also discussed theoretically and the analysis is applied to a store developed at the Laboratoriya radiolokatsii TsAO (Radar Laboratory of TsAO) (Otchet laboratorii radiolokatsii TsAO (Report of the Radar Laboratory of TsAO) 1959). Comparison of direct measurements with the theoretical calculations showed that the "efficiency" for a fluctuating signal is the same, to within experimental error, as the efficiency for a constant signal. The general conclusion is that both theory and experiments indicate that the effect of fluctuations in the echo signals on the parameters of the above store is negligible. There are 5 figures.

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S/194/62/000/005/114/157
D230/D308

35110

AUTHOR: Chernikov, A.A.

TITLE: Certain properties of 'thermics' as reflecting objects

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, 34, abstract 5zh237 (Tr. Tsentr. aerol. observ., 1961, no. 36, 126-134)

TEXT: A number of essential peculiarities of reflections from thermics are discussed. Use of the method of spaced reception made it possible to obtain some information about the dielectric inhomogeneities and also to estimate the degree of specular reflectivity. The analysis of the experimental material shows that a thermic can be represented as a closed volume with a sharp discontinuity in the dielectric permeability on its surface. [Abstractor's note: The meaning of the Russian word 'termik' is not clear]. [Abstractor's note: Complete translation].

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GORELIK, A.G.; KOSTAREV, V.V.; CHERNIKOV, A.A.

New possibilities for wind measurement by radar. Meteor. i gidrol. no.7:34-39 Jl '62. (MIRA 15:6)
(Radar meteorology) (Winds)

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3,5140

AUTHORS: Gorelik, A.G.; Kostarev, V.V.; Mel'nichuk, Yu.V.; Chernikov, A.A.

TITLE: A method of determining wind velocity by radar

PERIODICAL: Byulleten' izobreteniy, no. 7, 1962, 48

TEXT: Class 42i, 20_{01}. No. 146078 (699558/26-9 of February 28, 1961). 1) A method of determining wind velocity by observing objects moving in the wind stream through radar is distinguished by the fact that hydrometeors or artificial dispersion formations are used as observation objects. 2) A method as in 1, but distinguished by the fact that the wind velocity is determined by simultaneous reception of two signals. One is reflected from a "local object" and the other from a hydrometeor located at a distance equal to the distance of the "local object". 3) A method as in 1 and 2, but distinguished by the fact that the wind velocity is determined from the shift of the second maximum of a spectrum envelope observed on the indicator of a spectrum analyzer in respect to the first basic maximum located on the axis of the frequencies.

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ACCESSION NR: AR4015470 S/0169/63/000/012/B018/B018

SOURCE: RZh. Geofizika, Abs. 12B114

AUTHOR: Gorelik, A. G.; Mel'nichuk, Yu. V.; Chernikov, A. A.

TITLE: Relation of the statistical characteristics of a radar signal to the dynamic processes and microstructure of meteorological objects

CITED SOURCE: Tr. Tsentr. aerol. observ., vy*p. 48, 1963, 3-55

TOPIC TAGS: weather radar, statistical radar method, energy-dissipitation rate, radar signal spectrum, gradient wind velocity, drop size distribution, precipitation intensity, wind velocity, wind observations, precipitation

TRANSLATION: The article is concerned with a statistical radar method. A complete theory of the method is given and the possibilities are indicated for radar measurements of wind velocity and the microcharacteristics of precipitations. Computation formulas are given according to which it is possible, from the spectrum of the radar signal, to determine the mean energy-dissipitation rate (ε) in a turbulent flow, the gradient of wind velocity, the drop-distribution according to size, etc. A description of the apparatus and the observational procedure is given. The results

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ACCESSION NR: AR4015470

of observations in different types of clouds, for which values of ε are computed, and also the results of wind observations are given. The possibility of separating direction pulsations from pulsations for wind velocity is shown. Also presented are the results of radar measurements of the drop-size distribution, precipitation intensity, etc. A means for the further development of statistical radar methods is described. Authors' resume.

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USSR

ACCESSION NR: AP4002983 S/0286/63/000/018/0079/0080

AUTHOR: Kostarev, V. V.; Chernikov, A. A.; Gorelik, A. G.

TITLE: Method of atmospheric wind-sounding. Class 42, No. 157565

SOURCE: Byul. izobret. i tovarn. znakov, no. 18, 1963, 79-80

TOPIC TAGS: wind sounding, atmospheric wind sounding, atmospheric turbulence

ABSTRACT: The patent introduces a method for sounding wind in the atmosphere based on the use of the Doppler effect and an accompanying passive coherent-pulse radar-station reflector to determine the projection of wind velocity on a radar beam. The signal from the phase detector is conveyed to a frequency detector to determine simultaneously the mean velocity and parameters of atmospheric turbulence. The frequency detector converts the Doppler frequency into voltage which determines the amount and scale of turbulence, the integrator, which determines the projection of the mean wind velocity, and the recorder, which corrects wind and atmospheric data according to the antenna angle. Orig. art. has: 1 figure.

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ACCESSION NR: AP4002983

ASSOCIATION: none

SUBMITTED: 10Oct62	DATE ACQ: 13Dec63	ENCL: 00
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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

ACCESSION NR: AT4033564 S/2922/63/009/000/0145/0153

AUTHOR: Gorelik, A. G.; Kostarev, V. V.; Potemkin, I. G.; Chernikov, A. A.

TITLE: Increasing the sensitivity of the receiver of an aerological radar set

SOURCE: Vsesoyuznoye nauchnoye meteorologicheskoye soveshchaniye. 1st, Leningrad, 1961. Pribory* i metody* nablyudeniy (Instruments and methods of observation); trudy* soveshchaniya, v. 9, Leningrad, Gidrometeoizdat, 1963, 145-153

TOPIC TAGS: meteorology, aerology, meteorological instrument, meteorological radar, signal-to-noise ratio, radar sensitivity

ABSTRACT: The use of ordinary radar apparatus in aerology for observation of many meteorological objects is impossible because of inadequate sensitivity. The signal reflected from the object often is so weak that it is lost in the instrument noise. The authors therefore have devised a signal accumulator which improves the signal-to-noise ratio at the output of the receiver of an ordinary centimeter-range radar set. The signal accumulator makes it possible to detect a weak radar echo, determine the coordinates of its source and obtain data on the strength of the reflected signal. A simplified block diagram of the detection of a weak signal by use of this device is shown in Fig. 1 of the Enclosure. The amplitude characteristics and gain of the signal accumulator are described. A very detailed

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circuit diagram accompanies a text which fully describes the components and operation of the device. Orig. art. has: 18 formulas and 4 figures.

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 01

SUB CODE: ES, EC NO REF SOV: 003 OTHER: 000

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ACCESSION NR: AT4033564

ENCLOSURE: 01

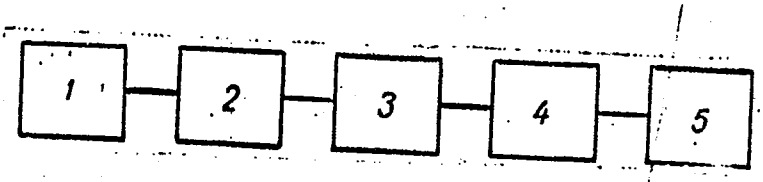

Fig. 1. Simplified block diagram for the detection of a faint signal. 1 - radar receiver; 2 - selector stages of signal accumulation device; 3 - integrator; 4 - shaping device; 5 - averaging device, employing quartz filter.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

ACCESSION NR: AR4034490 S/0058/64/000/003/H032/H032

SOURCE: Ref. zh. Fiz., Abs. 3Zh231

AUTHOR: Chernikov, A. A.

TITLE: Radar investigations of reflections from a clear sky

CITED SOURCE: Tr. Tsentr. aerol. observ., vy*p. 48, 1963, 56-97

TOPIC TAGS: radar meteorology, clear sky, refractive index inhomogeneity, centimeter band reradiation, scattered radar field

TRANSLATION: Various radar methods for the investigation of reflecting objects, along with general ideas concerning the seasonal and daily variations of the concentration, intensity, and other characteristics of radar echoes, are used to obtain information on the motion, structure, and form of the reflection sources; this serves as the basis for the construction of the suitable physical model of the

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ACCESSION NR: AR4034490

observed phenomenon. It is shown that the sources of reflection from a "clear" sky are regions of inhomogeneities of the refractive index, which produce highly directional reradiation in the centimeter band. An estimate of the minimum dimensions of these zones is given, and coefficients of reflection from the investigated inhomogeneities are also determined. It is established that in the summer months the concentrations of the inhomogeneities amount to 10^3--10^4 km^{-3}, and in those cases when the echo forms layers it reaches 10^5--10^6 km^{-3} and more. Under these conditions, as shown by preliminary estimates, the observed reflection sources make an appreciable contribution to the scattered field during the propagation of the waves beyond the horizon, and in some cases they can apparently completely govern this phenomenon. Bibliography, 35 titles.

DATE ACQ: 10Apr64 SUB CODE: AS, RA ENCL: 00

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308510018-5

ACCESSION NR: AT4036014 S/2789/63/000/048/0003/0055

AUTHOR: Gorelik, A. G.; Mel'nichuk, Yu. V.; Chernikov, A. A.

TITLE: Relationship between the statistical characteristics of a radar signal and the dynamic processes and microstructure of a meteorological object

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy*, no. 48, 1963. Novy*ye vozmozhnosti meteorologicheskogo primeneniya radiolokatsii (New possibilities for meteorological use of radar), 3-55

TOPIC TAGS: meteorology, meteorological radar, wind, wind velocity, wind direction, atmospheric turbulence, meteorological instrument, precipitation, cloud

ABSTRACT: A description of the statistical meteorological radar method is given. The full theory of the method is described and it is shown that the radar method can be used to measure wind velocity and the microcharacteristics of precipitation. Formulas are given for use with the radar signal spectrum for determining the mean rate of energy distribution (ε) in a turbulent flux, the wind velocity gradient, drop-size distribution, and other parameters. Instruments and observation methods are described. Results are given for observations in clouds of different genera for which the values ε have been computed. The results of wind observations are described and it is shown that

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